January 27, 1921.

Chief, Bureau of Soils,
Washington, D. C.

Dear Sir:

Enclosed find two advertisements which have appeared in the local papers. These will show the method of procedure which is being used by the National Kelp Products Company in financing the project.

At the present time they have not secured their definite site, but they have secured the rights on a harvester. Yesterday I was present at the San Diego Ad Club and gave a talk upon the history of the kelp industry and I was followed by Mr. H. B. Adsit, who spoke concerning the future of the National Kelp Products Company. The San Diego Ad Club is taking under advisement whether or not it would help the National Kelp Products Company in furthering its project.

It so happendd that the Hon. Phil Swing, Congressman elect from this district, was present, and I was able to put in a good many good words for the research plant at Summerland, telling the reason for its establishment, the method of financing, and the receipts that are returned to the U.S. Treasury. I happen to be very well acquainted with Mr. Swing, and it was a very opportune time to give him some straight facts, and yet embody these facts in a general talk to members of our local business men.

Very sincerely yours,

wcc/c

Collaborator.

Encl. 2.

January 27, 1921.

Dr. J. M. Turrentine,
Summerland, California.

Dear Turrentine:

Enclosed you will find a copy of the letter sent to the Chief. It occurs to me that it would be well for us to have a general conference concerning affairs in Southern California at some immediate date. As I have not checked up the quantity of kelp along the coast for some time, it would be convenient for me to come up to Santa Barbara at almost any time that you are there, or if you would like to go over the situation as it is developing in San Diego, I should be glad to have you come down here and take up the matter on the ground.

Could you kindly let me have the history of your daily cuts, together with the beds in which the cuts have been made, from the date of February 1, 1920 to the present date?

Very sincerely yours,

WCC/G
Encl.

Collaborator.

January 8th, 1951.

Mr. L. A. Turrentine,
Bakersfield, California.

Dear Turrentine:

Enclosed you will find a copy of the letter sent to the Chief. It occurs to me that it would be well for us to have a general conference concerning affairs in Southern California at some immediate date, as I have not checked up the quantity of help along the coast to Santa Barbara at almost any time that you are there, or if you would like to go over the situation as it is developing in San Diego. I should be glad to have you come down here and help me matter on the ground.

Drop your friendly line as here the history of your daily outs, together with the data in which the cuts have been made, from the date of February 1, 1950 to the present date?

Very sincerely yours,

Collaborator.

February 2, 1921.

Chief, Bureau of Soils,
Washington, D. C.

Dear Sir:

The National Kelp Products Company is still running the advertisements which I sent you samples of, and I find that at the present time they have raised about $30,000 of the $130,000 required. Also they have secured the exclusive use of the Firman patents on the kelp harvester barge. According to my recollection, these patents were of no particular value in that any one may build a barge, and the harvesting apparatus consists principally of reciprocating knives of the McCormick Harvester, but they are going to pay a good sized royalty for the use of these patents. These patents are now held by the Firman Estate, Firman himself having died about a year ago. If you recall, there was another patent issued on similar lines to George Innis.

Very sincerely yours,

WCC/G

Collaborator.

Chief, Bureau of Soils,
Washington, D. C.

Dear Sir:

The National Kelp Products Company is still running the advertisements which I sent you samples of, and I find that at the present time they have raised about $30,000 of the $150,000 required. Also they have secured the exclusive use of the Firman patents on the kelp harvester barge. According to my recollection, these patents were of no particular value in that any one may build a barge, and the harvesting apparatus contains principally of reciprocating knives of the McCormick harvester, but they are going to pay a good sized royalty for the use of these patents. These patents are now held by the Firman Estate, Firman himself having died about a year ago. If you recall, there was another patent issued on similar lines to George Lucia.

Very sincerely yours,

WCC/G

Collaborator.

USE AMERICAN POTASH

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF SOILS.
INVESTIGATION OF FERTILIZER RESOURCES.
EXPERIMENTAL PLANT FOR THE EXTRACTION OF POTASH FROM KELP.
SUMMERLAND, CALIFORNIA.

February 3, 1921.

Captain W. C. Crandall,

La Jolla, Calif.

Dear Sir:

Your letter of January 27th addressed to Dr. Turrentine was duly received at this office and has been forwarded to him at Washington, D.C. You will undoubtedly hear from Dr. Turrentine direct in regard to the suggestions contained therein.

We have made up and are enclosing herein a statement of the daily cuts of kelp made by us, dating back to February 1, 1920, which we trust will be of use to you.

Yours very truly,

Paul L. Hoaff.

Manager of Operations.

U. S. DEPARTMENT OF AGRICULTURE

Bureau of Soils

Experimental Kelp-Potash Plant.

Summerland, California.

MEMORANDUM REPORT FOR CAPT. CRANDALL.

- -

February 1920:				
Bed No. 19	106	tons	kelp	cut
20	162	"	"	"
21	726	"	"	"
23	676	"	"	"
25	100	"	"	"
March 1920:				
Bed No. 20	180	tons	kelp	cut
21	1311	"	"	"
22	479	"	"	"
April 1920:				
Bed No. 21	1120	tons	kelp	cut
22	388	"	"	"
May 1920:				
Bed No. 21	916	tons	kelp	cut
22	1516	"	"	"
June 1920:				
Bed No. 20	892	tons	kelp	cut
21	780	"	"	"
22	464	"	"	"
July 1920:				
Bed No. 19	140	tons	kelp	cut
20	1033	"	"	"
21	209	"	"	"
22	330	"	"	"
24	288	"	"	"
26	290	"	"	"

August 1920:				
Bed No. 20	580	tons	kelp	cut
22	135	"	"	"
24	250	"	"	"
26	840	"	"	"
27	150	"	"	"
September 1920:				
Bed No. 20	972	tons	kelp	cut
26	645	"	"	"
27	128	"	"	"
28	620	"	"	"
October 1920:				
Bed No. 19	110	tons	kelp	cut
20	695	"	"	"
22	150	"	"	"
26	995	"	"	"
November 1920:				
Bed No. 20	805	tons	kelp	cut
22	565	"	"	"
24	128	"	"	"
25	130	"	"	"
26	440	"	"	"
27	600	"	"	"
December 1920:				
Bed No. 20	1556	tons	kelp	cut
22	728	"	"	"
January 1921:				
Bed No. 20	2238	tons	kelp	cut
22	138	"	"	"

UNITED STATES DEPARTMENT OF AGRICULTURE

JWT:BHS BUREAU OF SOILS

WASHINGTON

February four,
1 9 2 1.

Capt. W. C. Crandall,
Scrips Marine Biological Laboratory,
La Jolla, California.

Dear Capt:

Your good letter of the 27th ultimo, has been sent to me for attention. It is a good letter and I am very glad to see it. It is encouraging to hear of the activity of the San Diego organization. By the way, what kelp harvester have they secured the rights to? I heard the Swift harvester was for sale. Is that the one they have secured?

Our appropriation is in desperate straits as matters now stand. The Agricultural bill has passed the House with our appropriation reduced to $5,000 and with orders to quit. We are working to have the appropriation restored in the Senate. I have not been able to secure any assistance, however, that I know of from the California delegation. What is the matter with that outfit? They have wanted to know if the Chambers of Commerce out there were taking any interest and they seem to want to shape their actions by what the Chambers of Commerce are doing. Can you do anything to get these organizations of San Diego, Los Angeles, and possibly Long Beach to make any move? Anything that you do along this line may be timely and effective. I will let you know what the final verdict is.

Kind personal regards.

Yours very sincerely,

J. W. Turrentine.

In Charge
Experimental Kelp Plant.

P.S.
Forgive the stenography. I hate it like hell this bad for correction. More hard to bowder than brains, these days!
JWT.

February 9, 1921.

Dr. J. W. Turrentine,
Bureau of Soil,
Washington, D. C.

My dear Dr. Turrentine:

Your letter of February 4 is at hand, and I regret very much to hear that the appropriation for the Summerland Experiment Station is in such desperate straits. I will take up the matter at once with our San Diego Chamber of Commerce and see if we can not bring pressure to bear on our representatives so that they will assist in trying to get the appropriation back into the bill. Also, I will try to have our Chamber of Commerce get assistance from the Los Angeles Chamber of Commerce, but such action is a little doubtful at the present time because of a difference of opinion concerning some road work which is under way.

Very sincerely yours,

WCC/G

February 9, 1921.

Dr. A. C. Tarrentine,
Bureau of Soils,
Washington, D. C.

My dear Dr. Tarrentine:

Your letter of February 4 is at hand, and I regret very much to hear that the appropriation for the Summerland Experiment Station is in such desperate straits. I will take up the matter at once with our San Diego Chamber of Commerce and see if we can not bring pressure to bear on our representatives so that they will assist in trying to get the appropriation back into the bill. Also, I will try to have our Chamber of Commerce get assistance from the Los Angeles Chamber of Commerce, but such action is a little doubtful at the present time because of a difference of opinion concerning some road work which is under way.

Very sincerely yours,

KOO/e

JWT:BR

UNITED STATES DEPARTMENT OF AGRICULTURE

BUREAU OF SOILS

WASHINGTON

INVESTIGATION OF FERTILIZER RESOURCES

February 10, 1921.

Capt. W. C. Crandall,
Scripps Institute,
La Jolla, Calif.

Dear Capt.:

I have your favor of the 28th ult., forwarded from Summerland. You have already been informed of my presence here and of the reasons therefor. I am still working in the hopes that our appropriation will be restored by the Senate. Of course, I am handicapped by having no interests back of me. It is largely a matter of going it alone. As soon as I get back I hope I can run down to San Diego and go over the whole situation with you and take up matters of mutual interest.

I wired you yesterday as follows "Chance to publish Brandt's paper as Department Bulletin, if you approve forward immediately". This is self-explanatory. If you can get the manuscript to me before I leave I believe that I can get it started on the road to publication. I presume this will meet with your approval. It may be that the manuscript will have to be curtailed somewhat but I presume you will approve any reasonable editing. If it is published as a Department Bulletin full credit, of course, will be given you and your organization.

With kind personal regards, I am

Yours very sincerely,

J. W. Turrentine.

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF SOILS,
WASHINGTON, D. C.

ADDRESS ALL COMMUNICATIONS TO
CHIEF, BUREAU OF SOILS.

INVESTIGATION OF FERTILIZER RESOURCES.

La Jolla, Calif.
Feb. 10th 1923

Chief, Bureau of Soils,
Washington, D.C.

Dear sir:

Under seperate cover I am sending the manuscript on "Kelp" written by Dr. Brandt. I am also send ng data as gathered to date on the amount of kelp that has been harvested both by bed and by date.

Very truly yours

Collaborator.

JWT:BR

UNITED STATES DEPARTMENT OF AGRICULTURE

BUREAU OF SOILS

WASHINGTON

INVESTIGATION OF FERTILIZER RESOURCES

February 11, 1921.

Capt. W. C. Crandall,
Scripps Institute,
La Jolla, Calif.

Dear Captain:

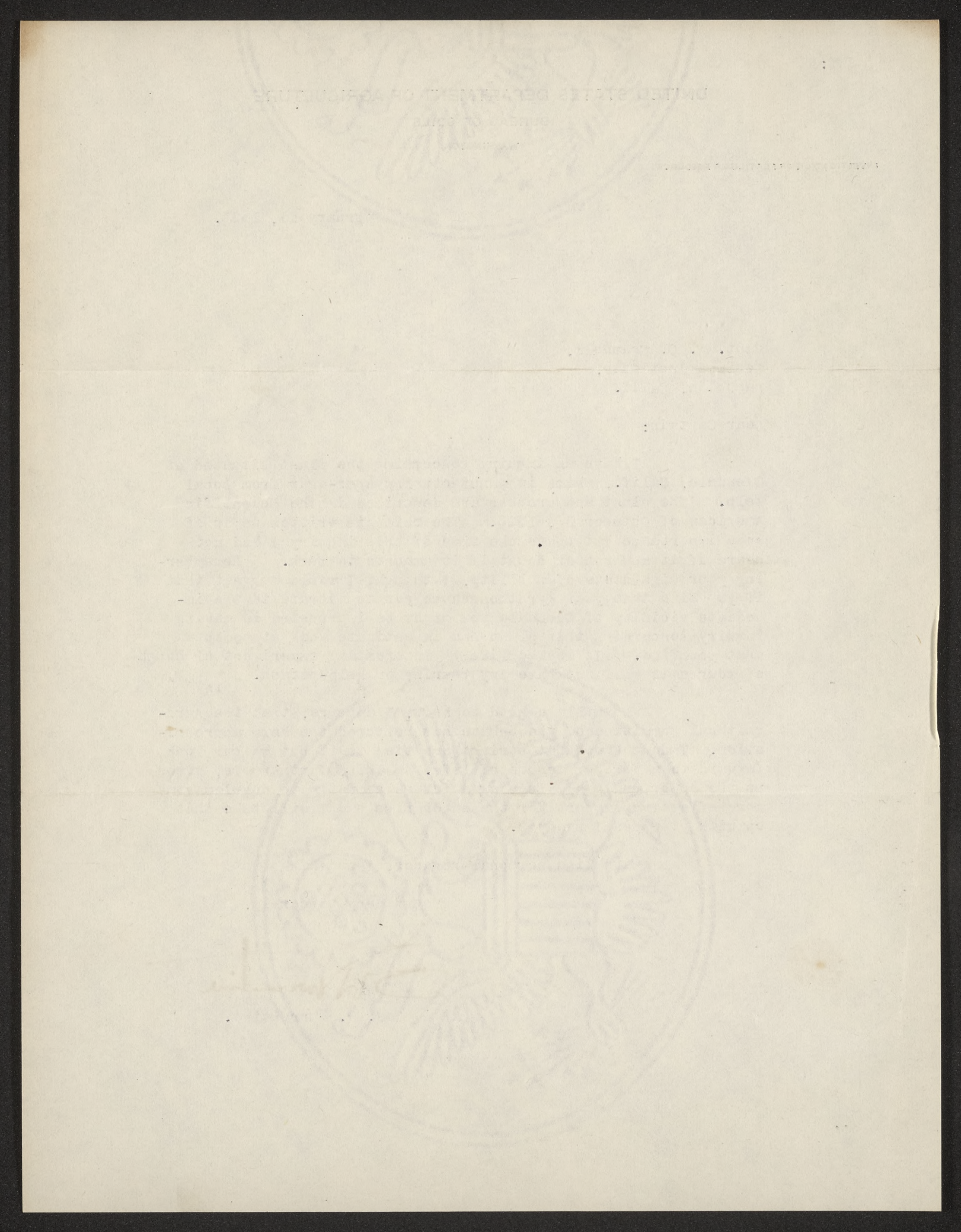
I have an inquiry concerning the plant situated at Glendale, Calif., which is manufacturing agar-agar from local kelp. The plant and process are described in the Scientific American of October 30, 1920. The thing is written up as of some importance but up to the time of this inquiry I had not heard of it and rather doubt if it amounts to much. Remembering your high state of mobility, I thought I would suggest that if you find that your gyrationscause you to vibrate to the immediate vicinity of Glendale you might be interested in making inquiry concerning this plant and investigate and let me know what you find. It looked like an interesting experiment although of course it will not have any bearing on kelp-potash.

You will be glad to know, I am sure, that the Agricultural Committee of the Senate has restored the kelp appropriation. I dont know what strings are tied to it but we can look forward to a further tenure of life. This, furthermore, gives us the opportunity of planning a future campaign to develop some more effective support for the enterprise and I will take that up with you when I see you.

With kind personal regards, I am

Yours very sincerely,

J. W. Turrentine.



February 15, 1921.

Dr. J. W. Turrentine,
Bureau of Soils,
Wasington, D. C.

My dear Dr. Turrentine:

Your favor of February 10 is at hand. I have received the information that I requested from you from the Summerland plant, as you have probably noticed in the material that I sent to the Chief of the Bureau. It is indeed with regret that I learn of the handicap that you are working under, and it might interest you to know that the San Diego Chamber of Commerce has sent a lengthy wire to Kettner and has also sent word to Senator Johnson and Congressman-elect Phil Swing, asking their hearty support and general activity toward the proper taking care of the California kelp project. They have also asked the Los Angeles Chamber of Commerce to take similar action.

I trust that Brandt's paper on the kelp has been received, and anything that you may be able to do in connection with that will be most heartily appreciated. If we can have a portion only printed, that would be better than nothing.

Very sincerely yours,

WCC/G

Collaborator.

February 18, 1921.

Dr. J. W. Turrentine,
Bureau of Soils,
Washington, D. C.

My dear Dr. Turrentine:

Your favor of February 10 is at hand. I have received the information that I requested from you from the Sunnyland plant, as you have probably noticed in the material that I sent to the Chief of the Bureau. It is indeed with regret that I learn of the handicap that you are working under, and it might interest you to know that the San Diego Chamber of Commerce has sent a lengthy wire to Kettner and has also sent word to Senator Johnson and Congressman Elliot Swing, asking their hearty support and general activity toward the proper taking care of the California kelp project. They have also asked the Los Angeles Chamber of Commerce to take similar action.

I trust that Brandt's paper on the kelp has been received, and anything that you may be able to do in connection with that will be most heartily appreciated. If we can have a portion only printed, that would be better than nothing.

Very sincerely yours,

cc/g

Collaborator.

JWT:BR

UNITED STATES DEPARTMENT OF AGRICULTURE

BUREAU OF SOILS

WASHINGTON

INVESTIGATION OF FERTILIZER RESOURCES

February 25, 1921.

Capt. W. C. Crandall,
Scripps Institute,
La Jolla, Calif.

Dear Capt. -

I have your good letter of the 15th inst. I am glad to note you were able to stir up some action in support of the kelp appropriation. As matters stand now, however, they are in a rather desperate state. Our bill has passed the Senate with our appropriation reduced to $5,000. Our only hope is that it will get caught in the jam and will not get through this Session. That will, however, only substitute suspense for certainty and I am not convinced that there are any advantages in that. However, it does give us a chance to work up some support on the part of the California delegation which to date, as far as I can see, has been nil. The Congressional Record does not show that any one of them has had a word to say in defense of the item.

The Brandt manuscript is on its way. It is now in the hands of the Bureau editor and will go from him to the printing office. The printer may send it back on account of the status of funds but I believe he will not do that; that is I think our funds are ample, although, due to a peculiar form of book-keeping, it appears that we have no funds at all. That accounts for the reason that the manuscript was returned formerly. I believe it is going through.

I am planning to return the end of next week; that is about the 5th and I am planning to run down to San Diego to talk over the situation with you. In the meantime, I remain

Yours very sincerely,

J. W. Turrentine.

USE AMERICAN POTASH

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF SOILS.
INVESTIGATION OF FERTILIZER RESOURCES.
EXPERIMENTAL PLANT FOR THE EXTRACTION OF POTASH FROM KELP.
SUMMERLAND, CALIFORNIA.

March 5, 1921.

Capt. W. C. Crandall,
Scripps Biological Institute,
La Jolla, California.

Dear Crandall:

Will you be at home toward the end of next week? If so, please let me know, and I shall try to arrange to get down to La Jolla at that time. I have just returned from Washington, and that will be the first opportunity I shall have of coming down.

Yours very truly,

J. W. Turrentine
In Charge.

JWT:ELB

Dr. J. W. Turrentine,
Summerland, California.

March 9, 1921.

My dear Turrentine:

I shall be at home and be mightly glad to see you the latter portion of the week.

Very sincerely yours,

WCC/E

Dr. J. W. Turrentine,
Summerland, California.

March 9, 1921.

My dear Turrentine:

I shall be at home and be mightly glad to see you the latter portion of the week.

Very sincerely yours,

VCC/E

USE AMERICAN POTASH

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF SOILS.
INVESTIGATION OF FERTILIZER RESOURCES.
EXPERIMENTAL PLANT FOR THE EXTRACTION OF POTASH FROM KELP.
SUMMERLAND, CALIFORNIA.

March 11, 1921.

Captain W. P. Crandall,

Scripps Biological Institute,

La Jolla, Calif.

Dear Captain:

I wrote you last Saturday telling you that I would be down this week, but I find I cannot do so and am now planning to run down next week. Please let me know if you will be at home at that time.

Yours very truly,

J. W. Turrentine
H. W. B.
In Charge.

JWT-HWB

March 22, 1921.

Dr. J. W. Turrentine,
Federal Kelp Experiment Plant,
Summerland, California.

Dear Dr. Turrentine:

One thing slipped my mind today in that I was to have asked you if you might have the man who is now detailed to take water samples for us, during the remainder of the time of the work at Summerland, increase his duties to the extent of filtering seven gallons of water through a net into a 2 oz. home made bottle, for us, putting in a small amount of formalin in each bottle, and give a record somewhat similar to the record made for the water samples. If it would be possible to have this done, we would appreciate it, and will send forward full instructions together with apparatus, with which to do the same. Hoping that this may be possible for you to give us this assistance, I am

Very sincerely yours,

WCC/G

Business Manager.

March 28, 1921.

Dr. J. W. Turrentine,
Medical Help Experiment Plant,
Summerland, Cal Istrate.

Dear Dr. Turrentine:

One thing slipped my mind today in that I was to have asked you if you might have the man who is now detailed to take water samples for us, during the remainder of the time of the work at Summerland, increase his duties to the extent of filtering seven gallons of water through a net into a 2 oz. home made bottle, for us, putting in a small amount of formalin in each bottle, and give a record somewhat similar to the record made for the water samples. If it would be possible to have this done, we would appreciate it, and will send forward full instructions together with apparatus, with which to do the same. Hoping that this may be possible for you to give us this assistance, I am

Very sincerely yours,

WCC/e

Business Manager.

caw/h

ADDRESS ALL COMMUNICATIONS TO
"CHIEF, BUREAU OF SOILS."

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF SOILS,
WASHINGTON, D. C.

March 25, 1921.

Prof. W. C. Crandall,
Scripps Institute for Biological Research,
La Jolla, California.

Dear Sir:

You doubtless are aware that Congress failed to appropriate funds for operating the Kelp Plant after June 30, and that the Secretary of Agriculture has been authorized and directed to make disposition most advantageous to the Government. With that end in view we would like to sell the plant as a unit, and I shall be very glad to have you advise me of your estimate of its present value; any suggestion you may care to make regarding disposition of the plant or of general conditions now prevailing. The long and continuous study you have made of the kelp situation during recent years, and your familiarity with conditions on the Pacific Coast places you in an advantageous position for the furnishing of information of value to me at the present time. I shall appreciate hearing from you in whatever detail you may care to write and as soon as you find it convenient.

Very truly yours,

Milton J. Dietz

Chief of Bureau.

USE AMERICAN POTASH

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF SOILS.
INVESTIGATION OF FERTILIZER RESOURCES.
EXPERIMENTAL PLANT FOR THE EXTRACTION OF POTASH FROM KELP.
SUMMERLAND, CALIFORNIA.

March 28, 1921.

Capt. W. C. Crandall,
Scripps Biological Institute,
La Jolla, Cal.

Dear Sir:

Replying to your favor of the 22nd inst., will state that if you will send us the apparatus and instructions, we will be glad to attend to this matter for you.

Yours truly,

J. W. Turrentine

In Charge.

March 30, 1921.

Mr. Milton Whitney, Chief,
Bureau of Soils,
Washington, D. C.

My dear Mr. Whitney:

Your letter of March 25th is at hand, and I will be pleased to do whatever I can to advise you concerning the value of the plant at Summerland. As soon as possible I will run up to Summerland and go over the plant so that I may be morewp to date than I happen to be right now, and I willthen send you my views concerning the selling of the plant.

Very sincerely yours,

WCC/G

Collaborator.

March 30, 1921.

Mr. Milton Whitney, Chief,
Bureau of Soils,
Washington, D. C.

My dear Mr. Whitney:

Your letter of March 25th is at hand, and I will be pleased to do whatever I can to advise you concerning the value of the plant at Summerland. As soon as possible I will run up to Summerland and go over the plant so that I may be morerp to date than I happen to be right now, and I will then send you my views concerning the selling of the plant.

Very sincerely yours,

wcc/c

Collaborator.

March 30, 1921.

Dr. J. W. Turrentine,
Federal Experimental Plant,
Summerland, California.

Dear Dr. Turrentine:

Mr. Allen is sending you by express a box of bottles to be used in making his collections. At the top of this box will be found a full set of directions for the use of whomever you set to the work.

Today I received a letter from the Chief requesting me to make any suggestions that I might see fit, relative to the disposal of the plant, and I have written him that later on I might write him, but first I should go up to Summerland. In this way I thought we might have a conference sometime in the future so that we would write somewhat the same character of material and I would not be gumming up your work for you in any way.

Very sincerely yours,

WCC/G

Business Manager.

March 30, 1921.

Dr. J. W. Turrentine,
Federal Experimental Plant,
Summerland, California.

Dear Dr. Turrentine:

Mr. Aiken is sending you by express a box of bottles to be used in making his coal tests. At the top of this box will be found a full set of directions for the use of whoever you set to the work.

Today I received a letter from the Chief requesting me to make any suggestions that I might see fit, relative to the disposal of the plant, and I have written him that later on I might write him, but first I should go up to Summerland. In this way I thought we might have a conference sometime in the future so that we would write somewhat the same character of material and I would not be running up your work for you in any way.

Very sincerely yours,

WCG/G

Business Manager.

USE AMERICAN POTASH

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF SOILS.
INVESTIGATION OF FERTILIZER RESOURCES.
EXPERIMENTAL PLANT FOR THE EXTRACTION OF POTASH FROM KELP.
SUMMERLAND, CALIFORNIA.

April 2, 1921.

Capt. W. C. Crandall,
Scripps Biological Institute,
La Jolla, California.

Dear Captain:

I have your good letter of the 20th ultimo. I wish to thank you for the consideration shown by your reply to the Chief. I do not know just what the Chief is engaged in, but he seems to be very busy about something, and I hope he will obtain results. To date, however, the activity of the Washington office has resulted in more confusion than assistance so far as I am able to judge at this distance. I hope that you are planning to come up to see us, and I should be glad to see you at any time.

With kind personal regards,

Yours very sincerely,

J.W. Turrentine
In Charge.

JWTurrentine

ELB

USE AMERICAN POTASH

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF SOILS.
INVESTIGATION OF FERTILIZER RESOURCES.
EXPERIMENTAL PLANT FOR THE EXTRACTION OF POTASH FROM KELP.
SUMMERLAND, CALIFORNIA.

June 25, 1921.

Capt. W. C. Crandall,
Scripps Biological Institute,
La Jolla, California.

Dear Captain:

I have your esteemed favors of the 16th, 18th and 23rd instant, and thank you for the information and other matter conveyed.

We are returning the microscope and other supplies to you by express. For the microscope we thank you most heartily. It has been very useful, indeed, to us, and has helped us a lot. It was very kind of you to arrange the loan for us.

As to the water sampling, we were very glad to co-operate, and are pleased to feel that our efforts have been of some service. I am informed that the samples now on hand are somewhat balled up, due to the demoralization which has taken place here within the last couple of months. I am not sure that the information can be straightened out so that these samples can be of any use. At any rate, we are returning the bottles and other materials.

I hope to have something interesting to convey shortly relative to the sale of the plant.

With kind personal regards,

Yours very sincerely,

J W Turrentine
In Charge.

JWTurrentine

ELB

April 16, 1921.

Chief, Bureau of Soils,
Washington, D. C.

Dear Sir:

On the morning of April 13 I left for Santa Barbara to investigate the conditions of the kelp plant there as I suggested I would in my last letter, and while on the trip I investigated the present condition of the kelp beds from here to that point, and I may report the kelp beds as follows:

Bed 4 Heavy
Bed 5, 6, and 7 Heavy
Bed 8 Very heavy
Bed 9 Heavy
Bed 10 Heavy
Bed 11, 12, 13, 14 Heavy
Bed 15 Medium
Bed 19 Medium
Bed 20 Heavy
Bed 21 Very heavy
Bed 22 Very heavy.

I reached Santa Barbara on the morning of the 14th and went over the plant with Mr. Sheaf and later with Dr. Turrentine. The conclusions that I arrived at so far as selling this plant to a kelp company is concerned, are as follows:

1. Location of the plant: The present location is in an open roadstead where the unloading facilities are fairly difficult, although the beds are so adjacent as to over-come to some extent this objection.

2. The labor situation is rather difficult because of the smallness of the size of the town and its distance from any commercial city, labor therefore being dependent upon the local farmers and state workers who happen to live in that vicinity.

3. The size of the plant would be restricted to a production not to exceed 200 wet tons per day, so that the opportunity for expansion is comparatively limited. Even expansion to this extent would require building out into the surf-line.

April 16, 1921.

Chief, Bureau of Soils,
Washington, D. C.

Dear Sir:

On the morning of April 13 I left for Santa Barbara to investigate the conditions of the kelp plant there as I suggested I would in my last letter, and while on the trip I investigated the present condition of the kelp beds from here to that point, and I may report the kelp beds as follows:

Bed 4 Heavy
Bed 5, 6, and 7 Heavy
Bed 8 Very heavy
Bed 9 Heavy
Bed 10 Heavy
Bed 11, 12, 13, 14 Heavy
Bed 18 Medium
Bed 19 Medium
Bed 20 Heavy
Bed 21 Very heavy
Bed 22 Very heavy.

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1. Location of the plant: The present location is in an open roadstead where the unloading facilities are fairly difficult, although the beds are so adjacent as to over-come to some extent this objection.

2. The labor situation is rather difficult because of the smallness of the size of the town and its distance from any commercial city. Labor therefore being dependent upon the local farmers and state workers who happen to live in that vicinity.

3. The size of the plant would be restricted to a production not to exceed 800 wet tons per day, so that the opportunity for expansion is comparatively limited. Even expansion to this extent would require building out into the surf-line.

4. The plant is located in a community that is more or less adverse to any commercial plant, and a private firm would probably have more difficulty than would the running of the plant under federal auspicious.

5. Machinery: As the plant has been developed, it has been necessarily built up along experimental plans and therefore the present arrangement of the plant as it now stands could not be taken as a final arrangement for a firm entering into the making of kelp products as a commercial proposition. Many of these changes seem to be foreseen by both Mr. Sheaf and Dr. Turrentine, so that a company might take advantage of their foresight and save labor by making some rearrangements.

Some of the machinery is in excellent condition, while some of it is now about ready for replacement, or it would be necessary to replace it probably within the year, as for instance, the dryers are now practically burned out, as is the present incinerator.

6. I stopped in Los Angeles on the way down and have previously looked into the situation at San Diego, and I do not find any local possibility of a group of men willing to take over the present plant. The factors that are now against floating a proposition of that kind are that we are over-run with bond sales, and a proposition such as taking over the kelp plant does not offer sufficient attraction to get the small buyer to enter a company that would operate the plant. The present fall in the price of potash and the small yield of carbon would not leave a sufficiently large surplus to satisfy the type of people that would buy such character of stock.

On a large scale in which not only the Summerland plant were to be used but other plants established at San Pedro and San Diego, there might be some opportunity, as such a plant would undoubtedly show fair profits, where a small plant would be unable do do so, as the character of sales would require that large quantities would be needed in stock rather than small quantities. However, to me it seems that for this sort of a concern it would be more probable that some established plant which was using large quantities of carbon in its processes would be in a better position to handle kelp manufacture than any other character of institution, in that the profit would not have to be made directly from the kelp but rather the profits would be made from their other products, in which the products of the kelp were only used as ingredients. Such a suggestion would hold true for sugar refineries, large dye plants or other

manufacturing concerns which use carbon extensively, either as a bleaching agent or as one of the ingredients of their products.

7. The value of the plant as scrap would not be to exceed $35,000, and even as such, it would be necessary, I think, to peddle considerable portions of it, such as the motors, pumps, and gears.

Trusting that this will be the information that you asked for, I am

Very sincerely yours,

WCC/G

Collaborator.

Condition of beds in summer

May 14th 1921

Chief, Bureau of Soils

Washington D.C.

Dear sir:

On May April 29th, I went to Los Angeles and joined Dr.Torrey-tine who took me to Santa Barbara in order that we might make a careful final survey of the kelp beds for this spring. This we felt was desireable on account of the study that we have been making on the summer disappearance of the kelp and the desiresbility of our seeing the present beds while together so that latter we would have an assured common understanding of the condition of the beds, should it be desired that I continue the study of the kelp after the experimental plant is closed down.

On the 30th we left on the Mayflower from Santa Barbara and visited the beds above Santa Barbara. With the exce tion of the bed #23, we found the other beds in a very heavy condition.

#23	Thin and not as large as formerly.
24	Heavy
25	Heavy
26	Heavy
27	Heavy and broader
28	Very heavy and broader
22	Heavy.

On the first we left Summerland and went to San Pedro and the

beds were observed to be as follows:

#21	Very heavy	
20	Heavy	
19	Medium	
18	Medium	
17	Medium	
16	Thin	Practically hot in sight.
14	Heavy	
13	Heavy	
12	Very heavy	
11	Medium.	

At present they are drilling an oil well on the edge of #11.

There is talk of letting the outfall of a Los Angeles sewer empty into the bed #11.

Very truly yours

Collaborator